Amendments to the Specification:

Please replace paragraphs [19], and [29] with the following corresponding amended paragraphs:

[19] In accordance with ~~yet another~~ a further aspect of the invention, a method of providing a network management and service provisioning solution is presented. The method comprises a sequence of steps. At least one plug-in brokering access to at least one network management and service provisioning enabling technology is registering with a framework providing the network management and service provisioning solution. At least one managed data network entity specification loaded by the framework is parsed. A single managed entity object class is derived into a managed object type hierarchy via type derivation. And, at least one message received by the framework from at least one network management and service provisioning software application is processed. The framework acts as an enabler separating managed data network entities, enabling technologies and software applications, as well as a facilitator therebetween in providing the network management and service provisioning solution.

[19a] In accordance with a further aspect of the invention, a run-time expandable network management and service provisioning framework for use in network management and service provisioning system is provided. The framework includes a plug-in registry, a directive parser, an executable code implementation of a single managed entity object class, a generic lexical analyzer, and an interpreter. The plug-in registry is configured to load and register at run-time at least one enabling-technology plug-in brokering access to network management and service provisioning enabling technologies. The plug-in has an associated run-time loadable lexical analyzer stub. The directive parser is configured to process, at run-time, at least one self-contained managed data network entity specification file including directives. The executable code implementation of the single managed entity object class is run-time derivable via type derivation into a derivation hierarchy of managed data network object types based

on run-time parsed entity derivation directives. The generic lexical analyzer is augmented, at run-time, with the lexical analyzer stub associated with the registered plug-in. The augmented lexical analyzer processes, at run time, an enabling-technology-specific use directive parsed from the managed data network entity specification file. And, the message interpreter processes, at run-time, messages received from at least one network management and service provisioning software application. Each message includes a software application directive employed to invoke at least one method of a corresponding managed data network object instance of a derived managed data network object type to access a corresponding field installed managed data network entity via the enabling technology plug-in. A separation is achieved between managed data network entities, enabling technologies and software applications. The separation enables independent development, maintenance and troubleshooting of network management and service provisioning deployments minimizing the need to re-code and re-compile framework code in support of new managed entity object types.

[19b] In accordance with yet another aspect of the invention, a method of effecting network management and service provisioning within a network management and service provisioning computing environment of a network management and service provisioning system including a network management and service provisioning framework is provided. The method has a sequence of steps. Directives are parsed from a managed data network entity specification file. A single managed entity object class is derived, at run-time, into a managed entity object type derivation hierarchy of at least one managed data network object type via type derivation in accordance with an entity derivation directive parsed at run-time from the managed data network entity specification file. An enabling technology plug-in brokering access to at least one network management and service provisioning enabling technology is loaded and registered with a plug-in registry. The plug-in has an associated run-time loadable lexical analyzer stub. A generic lexical analyzer is augmented, at run-time, with the

lexical analyzer stub of the registered plug-in. The augmented lexical analyzer processes a parsed enabling-technology-specific use directive. And, at least one message received by the framework from a network management and service provisioning software application is processed, the message including a software application directive employed to invoke an operation of a corresponding managed data network object instance of a derived managed data network object type to access a corresponding field installed managed data network entity via the enabling technology plug-in. The framework acts as an enabler by separating managed data network entities, enabling technologies and software applications, as well acts as a facilitator therebetween in providing the network management and service provisioning while minimizing the need to re-code and re-compile framework code in support of new managed entity object types.

[29] The framework 200 implements a new architecture for providing network management and service provisioning solutions. The new architecture categorizes the above presented elements into:

- Manageable data network entities 220 representative of field installed physical and logical managed data network entities to be configured and controlled in providing network management and service provisioning solutions. The managed entities include:

  i. Physical data network equipment installed in the field such as: nodes 102/104, routers, switches, hubs, OC-3 links 108, etc., and

  ii. Logical data network entities associated with data network equipment installed in the field such as: network partitions 106, paths 128, virtual circuits, virtual routers etc.;

- Network management and service provisioning software applications 210 used to configure and control the manageable data network entities 220. The software applications 210 include as mentioned above: inventory reporting 214, configuration

management, statistics gathering, performance reporting, fault management, network surveillance 212, service provisioning, billing & accounting 216, security enforcement, etc.;

- Network management and service provisioning enabling technologies 230 providing interaction between the manageable entities 220 and, logical and field installed physical managed data network entities. Enabling technologies 230 include:

  i. Data network management and service provisioning protocols: SNMP, CMIP, CLI, DNS, etc., and

  ii. Data network management and service provisioning devices: databases, DNS servers, etc.

The interaction may be command driven as specified by the software application 210, as well as event driven as a current state of the managed data transport network(s) in the realm of management changes.